

1990

KODIAK MANAGEMENT AREA  
HERRING SAC-ROE HARVEST STRATEGY

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## ABSTRACT

The 1990 Kodiak herring sac-roë fishery guideline harvest level is 2,375 tons. The season for this fishery will begin at 12:00 noon on April 15 and will close at 12:00 noon on June 30. Fishing periods will be 24 hours in duration and each will begin at 12:00 noon on odd numbered days and end at 12:00 noon on even numbered days.

The Kodiak sac-roë fishery is currently managed by the use of 57 management units which are treated as individual stocks and have a history of sac-roë harvests. Additionally there are 14 exploratory management units which potentially support sac-roë stocks and 6 management units which occur offshore and are not perceived to have habitat suitable for spawning activity to occur.

Guideline Harvest Levels (G.H.L.) are provided for each of the 57 management units as shown in Table 1 on page 10. In-season emergency order closures for each unit will occur as the G.H.L.'s for each unit are achieved. Closures may also result prior to attaining a G.H.L. if the fishery performance indicates that stock status is weaker than expected.

All in-season emergency order closures or reopenings will be broadcast on 4125 Khz by Peggy Dyson following her daily marine weather broadcasts at 8:00 a.m. and 6:00 p.m. News releases will be available both inside and outside the Kodiak ADF&G building at past locations. Additionally, the most current closure announcements will be available 24 hours/day on the ADF&G record-a-phone at 486-4559.

There are several new regulations that will be in effect for the first time during the 1990 season. These regulations are listed on page 2; A complete copy of the Kodiak Area Herring Regulations are attached to the Harvest Strategy.

All herring buyers/processors and all tenders are required to register at the Kodiak ADF&G office prior to commencing operations in the Kodiak Area. There is no special vessel registration required for fishing vessels.

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KODIAK AREA HERRING SAC-ROE FISHERY

INTRODUCTION

The Kodiak Area herring sac-roë fishery has occurred annually since 1964, a 26 year period. This fishery was an open-to-entry fishery from 1964 to 1980, and was under a moratorium-to-new-entry fishery from 1981 to 1984, and has been a limited entry fishery from 1985 to present. Effort levels during these latter years are shown in Table 2 on page 14. A listing of entry permits issued by gear type as of January 1989 is shown in Table 3 on page 15.

This fishery targets on individual herring stocks during their spawning period. The desired product is pre-spawn herring having a roe recovery percentage acceptable to industry. In recent years the average roe recovery has approximated 10% in this fishery.

During this 26 year period the average harvest has been 1,350 tons. For the eleven (11) year period from 1979-1989, when both seine and gillnet gear levels have evolved through similar regulatory adjustments, the average harvest has been 2,048 tons. The annual harvest levels during this eleven year period have oscillated closely around this average harvest (Table 2, page 14).

GENERAL HARVEST POLICY

Harvesting is intended to occur in an orderly fashion with minimal waste of the resource and within conservation limits as determined by the Alaska Department of Fish and Game (ADF&G). Consequently, ADF&G will manage the fishery per the statewide general herring policy which provides for harvesting to occur in traditional in-shore areas and at the traditional time of greatest roe recovery value, as much as possible. However, roe recovery will not be a criteria for emergency openings or closures except in cases where documented excessive wastage is, or is expected to be, a factor.

Because of the differential timing and abundance of Kodiak's various exploited herring stocks, relatively high ratio of gear levels to Guideline Harvest Levels (GHL's), and the competition between gear types for the same stocks, this fishery is best served by a fixed opening date, which is currently April 15. The season will close for each stock by emergency order as their respective guideline harvest levels are achieved or when fishery performance and stock performance indicate that deviations from the guideline harvest levels are warranted, i.e. where actual harvests occur at levels greater or lesser than expected. Stocks which are considered to be under-exploited in-season will

remain open for adequate exploitation to occur or until the regulatory closure of June 30. During the regulatory season, April 15 to June 30, stocks which have been closed to harvesting may be reopened if it is determined by ADF&G that "new" fish have increased the available spawning biomass to the point that the initial exploitation rate has dropped below 10% for that stock (See Table 1.) Any reopenings will require confirmation that the "new" fish are not juvenile herring, post spawners, or other forage fish and will require that ADF&G have the ability to monitor and regulate the reopening "on the grounds". At least 24 hours notice will be given prior to any reopenings.

#### REGULATORY ABSTRACT

##### REGULATIONS IN EFFECT:

A listing of the new regulations for 1990 are as follows:

##### NEW REGULATIONS FOR 1990

- 5 AAC 27.505 (c)(3)(B) and (C) are amended and (c) (3) (C) is added to read:

##### DESCRIPTION OF DISTRICTS AND SECTIONS (See pages 18 and 19)

(c)

(3)

(B) Inner Uyak Bay Subsection: all waters of Inner Uyak Bay south of the latitude of Carlsen Point, excluding the Larsen Bay and Browns Lagoon subsections;

(C) Browns Lagoon Subsection: that portion of the Inner Uyak Bay Section in Amook Pass south of a line from the northern tip of Amook Island to Carlsen Point and north of the latitude of the southern tip of Amook Island.

(f)

(2)

(B) East Sitkalidak Subsection: all waters of East Sitkalidak Straits and associated bays enclosed by a line from Left Cape (57°15'30" N. lat., 152°57' W. long) to Cape Barnabas (59°09' N. lat., 152°53' W. long.) and east of 153°16'24" W. long., excluding the Tanginak Anchorage Subsection;

(C) West Sitkalidak Subsection: all waters of West Sitkalidak Straits and associated bays west of 153°16'24" W. long. and north of a line from Cape

Kodiak to Natalia Point, excluding the Barling Bay Section.

Authority: AS 16.05.251

5 AAC 27.525(a) is amended to read:

5 AAC 27.525. SEINE SPECIFICATIONS AND OPERATIONS: No purse seines may be more than 1,025 meshes in depth, including meshes used as chaffing gear, or more than 100 fathoms in length.

5 AAC 27.536. SIZE LIMITS: No CFEC herring seine permit holder may sell or have aboard a vessel any herring that were taken during the herring sac-roo season if the number of individual herring per 50 pounds of net weight exceeds 250 fish.

This was a new regulation in 1989 which may need to be adhered to during the 1990 season due to the increased biomass of age 3 and age 2 herring expected to be present in the Kodiak Management Area.

- This regulation was developed by Kodiak ADF&G staff in order to provide adequate protection to any stock heavily dominated by recruit-age fish. This regulation was supported by the Kodiak Fish and Game Advisory Committee and was unanimously supported by the Alaska Board of Fisheries.
- It was recognized that this regulation was unique for the State's sac-roo fisheries, however the Kodiak sac-roo fishery itself is unique in the manner it is conducted. By allowing a free-roaming fleet to randomly harvest any of the recognized 57 stocks without 100% on-the-grounds monitoring by ADF&G, the potential negative impact on all stocks is relatively high. This is particularly true for smaller stocks heavily composed of recruit-age fish. This regulation was intended to provide biological protection for these stocks without affecting the unique nature of Kodiak's sac-roo fishery.
- All fishermen must be able to evaluate, on the grounds, before "seined-up" herring are killed, if the school of herring they've captured is comprised of large enough herring so that a weighed sample of 50 pounds is not comprised of more than 250 fish, i.e. the herring are large enough that it doesn't require 5 or more herring to yield one pound of net weight.

This can be determined through the normal process of sampling seined-up herring for adequate roe-recovery. At that time, through the use of a small scale, it can be determined if the "number per weight" requirements will be met, i.e. the number of herring comprising the catch does not exceed 250 fish per 50 pounds of net weight.

It will be illegal to possess or sell a quantity of herring which, when sampled, does not meet this minimum size limits of 250 fish per 50 pounds of net weight.

#### REGISTRATION REQUIREMENTS:

##### Tenders and Processors

The tender registration procedure requires:

- Each tender operator and processor must register either in person or may be registered by an authorized agent for that tender or processor.
- Registration must occur prior to taking fish on-board the tender or taking fish at the processing plant.

Registration will ensure that all tenders and processors know the proper reporting requirements needed by ADF&G to manage the herring sac-roë fishery.

#### THIS REGULATION WILL BE STRICTLY ENFORCED FOR THE 1990 SEASON!

- (See Regulation 5 AAC 27.540 of the Commercial Herring Regulations.

##### Fishing Vessels

There are no special registration requirements for either seine or gillnet vessels.

#### GUIDELINE HARVEST LEVELS:

For the 1990 sac-roë season, approximately 2,375 short tons are expected to be harvested from the entire management area. Harvest projections by management unit are listed in Table 1.

These harvest projections are the best estimates of desired harvest levels for each stock based upon ADF&G evaluation of stock status. These harvest projections are not guaranteed quotas and the actual harvest may exceed or fall short of these projections.

In-season evaluation of each stocks actual status will be guided by several criteria associated with stock performance, e.g. biomass estimates, age composition, etc! and with fishery performance, e.g. fishery timing and harvest duration, etc!

### FISHING SEASON

April 15 through June 30 unless closed earlier by emergency order on a stock by stock basis.

Closures may result from desired harvest levels of each stock either being achieved or else in jeopardy of being significantly exceeded. Closures may also result when unexpected weaknesses in stock strength become apparent.

### FISHING PERIODS

Initially, fishing periods will be 24 hours long. They will begin at 12:00 Noon on all odd numbered days and end at 12:00 Noon on all even numbered days. The first 24 hour fishing period will begin at 12:00 Noon on April 15.

### CLOSED AREAS:

#### Regulatory Closures

Browns Lagoon is closed at the seaward entrance of the lagoon.

Women's Bay is closed inside of a line from Shannon's Point to Nyman's Peninsula. The latitudes and longitudes of these points are described in regulation 5 AAC 27.530.

#### 1990 Emergency Order Closures:

All Uganik Island Lagoons will remain closed until it can be determined that specific and adequate spawning biomasses are available for harvest; see Figure 3 on page 19 for the approximate location of these closure's boundaries.

### EXTRA TIME FOR GILLNETTERS

Under certain conditions, herring gillnetters are allowed a two hour grace period before having to completely remove their gear from the water. These conditions are:

1. Herring gillnets may remain in the water up to two hours after the announced "primary closure time" for



those announced fishing periods having fishing time of three hours or less.

2. Herring gillnets may remain in the water up to two hours after the announced "primary" closure time for those fishing periods greater than three hours in length, where the announcement occurs less than three hours before the scheduled "primary closure time" of the fishing period.

The "primary closure time" is the time at which all seine gear must have completed fishing. When it applies, the "secondary closure time", i.e. at the end of the two hour grace period for gillnet gear, ALL GILLNETS MUST BE COMPLETELY OUT OF THE WATER AND NO GILLNET GEAR MAY BE SET OR RESET AFTER THE "PRIMARY CLOSING TIME".

#### AIRPLANES:

There are no restrictions on the use of airplanes in the roe herring fishery.

#### IN-SEASON STRATEGY

##### General Discussion

As shown in Table 1, those sections where historical harvests have occurred, have been assigned guideline harvest levels. Those sections where sporadic or no harvests have occurred, have been designated "Exploratory" with no designated guideline harvest level, however in-season closures will be used to ensure that excessive harvests are minimized in exploratory situations.

The guideline harvest levels established for each section, district and/or the entire management area are meant to reflect the stock status. This means that the previous season's stock performance has been evaluated and that trends have been identified and used to influence the current season's GHLS. Specifically, these criteria are 1) 1989 expected biomass vs. actual biomass estimates, 2) average school size, 3) trends in age composition, 4) level of recruitment (age 3), 5) proportion of the spawning population age 5 and younger, 6) level of age 2 fish in the spawning biomass (indicator of future recruit strength) and 7) spawn observations (extent, frequency, amount deposited). This information is supplemented by fishery performance information, namely the expected vs. actual harvest timing, harvest duration, and harvest level.

Guideline harvest level adjustments are subsequently made based upon the aforementioned criteria. Adjustments may

vary from 0 to  $\pm$  100% of the previous season's GHL depending upon the degree remedial action is required, generally adjustments are gradual,  $\pm$  25% or  $\pm$  50%.

At any time in-season, closed area adjustments can be made when it appears that pre-season expectations were wrong. Consequently there may be sections either closed prior to reaching their GHL's or allowed to harvest in excess of their GHL's either in one opening or reopenings if the assessed available spawning biomass warrants it.

### Fishing Periods

Initially, fishing periods will begin at 12:00 Noon on the odd numbered days of the month beginning on April 15 and end at 12:00 Noon on the even numbered days. Staggered days of fishing have the advantage of providing clearly defined closed periods which allow the staff time to collect, summarize, and update all harvest data from previous fishing periods; it allows for comparisons between reported and actual harvests. Since 1979, the occurrence of significant excessive harvests in this fishery have been prevented by providing these pre-established fishing periods. Towards the end of the season (usually early June) when fleet size and exploited stocks are few in number, fishing periods may be modified to provide more continuous fishing time to facilitate adequately harvesting late occurring stocks. However, ADF&G's ability to monitor this fishery becomes very limited by late May and June and this will be a major consideration in the nature of fishing period modifications.

For the 1990 sac-roe fishery, more restrictive adjustments in fishing periods are not expected to occur. However, in the event that active gear levels expand or become unexpectedly efficient to the point that a pattern of excessive harvests develop, deviations from the normal 24 hour fishing periods may be required.

### E.O. Announcements: "Getting the Word"

Because the management strategy for this fishery allows for all gear to fish all open areas during the open fishing periods, there is considerable dispersion of gear throughout the season. Consequently, it is very important for the fleet to keep abreast of any changes in closures, potential short notice closures, and/or reopenings. This can be accomplished in the following ways: 1) By personal contact with the Kodiak Herring Management staff in Kodiak via office visits, telephone (either at work or at home), or radio-telephone; 2) By contact with ADF&G field personnel and the ADF&G vessel, the M/V COHO; 3) By contacting Peggy Dyson on 4125 mhs or any local herring processor and having

them transmit the latest Kodiak herring emergency order; 4) By calling the 24-hour recorded message phone at 486-4559; 5) By listening for any emergency order update which will be broadcast by Peggy Dyson following either her 8:00 A.M. or 6:00 P.M. weather broadcasts; 6) By reading or collecting the latest emergency order from the pouch posted outside the entrance to the Kodiak Fish and Game building; and 7) By listening to the Fish and Game reports broadcast over the local AM and FM radio stations (consult stations for broadcast times). No announcements will be given via VHF because of the limited broadcast range from the Kodiak office; however special consideration may be given to the Chiniak Bay fishery if the VHF base station is operational for the 1990 season.

Because of the extensive announcements associated with this fishery, it is highly recommended that fishermen document the latest E.O. announcement broadcast from Peggy Dyson by either marking a chart or making a tape recording of her broadcast. Many fishermen currently do this as do the ADF&G and F&W protection vessels.

#### ADF&G Field Crews/Fishermen Cooperation:

The crew on board the Department's M/V COHO and seasonal biologists in remote tent camps will aid the Area Management Biologists by making frequent fishermen contacts in order to collect data on harvest levels and rates, fleet movements, and fleet observations of herring concentrations. Fishermen cooperation will be appreciated when Department personnel request herring samples from the commercial catch; also, samples from juvenile schools inadvertently seined-up will be gladly accepted by all ADF&G personnel. These samples will be used primarily for monitoring age composition, which assists in determining the health of the stock when used with other stock performance indicators. Copies of historical age data by stock are readily available at the Kodiak ADF&G office.

ADF&G field crews will also be monitoring and mapping spawning activities, and will be soliciting information on commercial sightings to supplement information gathered by ADF&G. Fishermen and spotter pilots are encouraged to provide biomass and spawning information to ADF&G; these reports will be treated confidentially. Past cooperation has generally been excellent and has proven valuable in evaluating stock status and in gaining critical management information.

Because of concern over the occurrence of oil from the March 24, 1989 oil spill in P.W.S. affecting Kodiak fish stocks, habitat, and other wildlife, any information on oil

encountered by fishing vessels, tenders and spotter pilots should be passed along to ADF&G personnel for documentation.

#### In-Season Catch Reporting

With approximately 100+ limited entry permit holders expected to fish during the 1990 sac-roë season, frequent aerial surveys and timely catch reports will continue to be an important management tool, particularly in areas that are not covered by field crews. Timely and accurate catch information provided by the processors and fishermen will be essential in managing the fishery. Processors and independent tender operators will be required to provide daily tallies of herring deliveries by statistical area and must provide accurate estimates of herring onboard tenders that have not yet delivered to the cannery. Inaccurate or untimely information could result in the closure of an area. Individual code sheets will be provided for each tender or processor that is required to report catches on a daily basis by radio. Each tender operator and buyer must register with the Department prior to fishing and will be given a packet containing regulations, statistical charts, etc.

#### Guideline Harvest Level

The 1990 sac-roë harvest should be one of the largest on record, approximately 2,375 tons are expected to be harvested. If recruitment is above average in several major stocks or if virgin stocks are exploited, the actual harvest may well exceed the GHL. However, if recruitment is generally weak area-wide and/or adverse weather conditions prevail throughout the season the actual harvest may be significantly less than the GHL.

The listing in Table 1, "GUIDELINE HARVEST LEVELS BY MANAGEMENT UNIT" will be used as an aid in making in-season management decisions. These harvest levels are meant to reflect the status of each listed stock, however, some stocks lack the data base needed for adequate evaluation. Consequently, annual harvest levels for these stocks may fluctuate considerably until their status is more clearly understood. Again, all fishermen, pilots and processors are encouraged to provide the ADF&G management staff with any information or estimates on stock size they may accumulate either in-season or post-season.

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